

Project Selection Process & Initial Projects Identified

TMC Pooled Fund Study Meeting
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TMC Pooled Fund Study

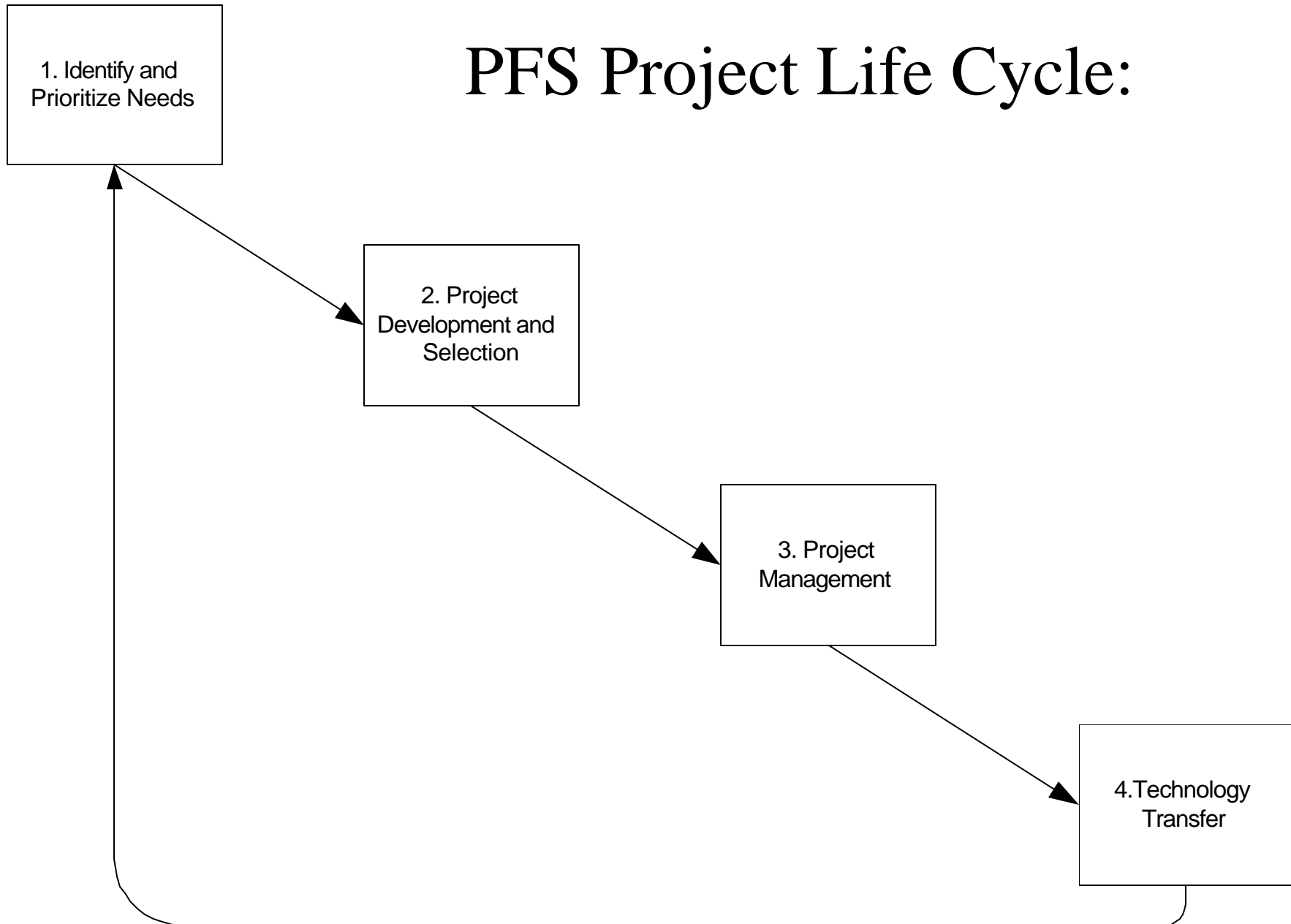
Process to Identify & Select Projects

- Review steps followed to date
- Review identified normal process
- Review project proposal format
- ID key TMC areas & issues
- Briefly review initial project proposals

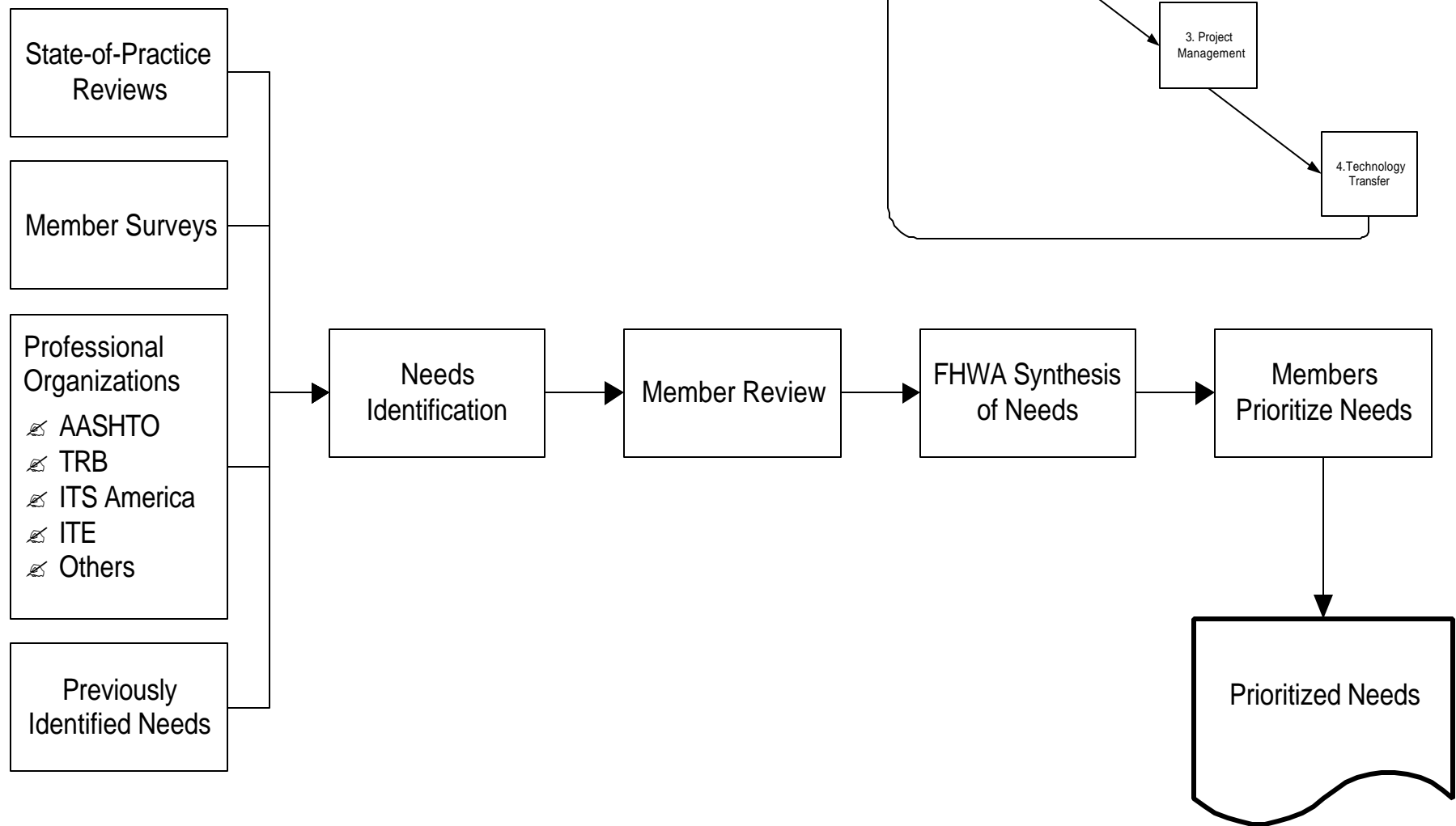
Process Followed to Date:

- Solicited project ideas & concepts
- Developed draft project proposals
- Revised proposals based on review comments
- Finalize proposals & select projects @
PFS meeting

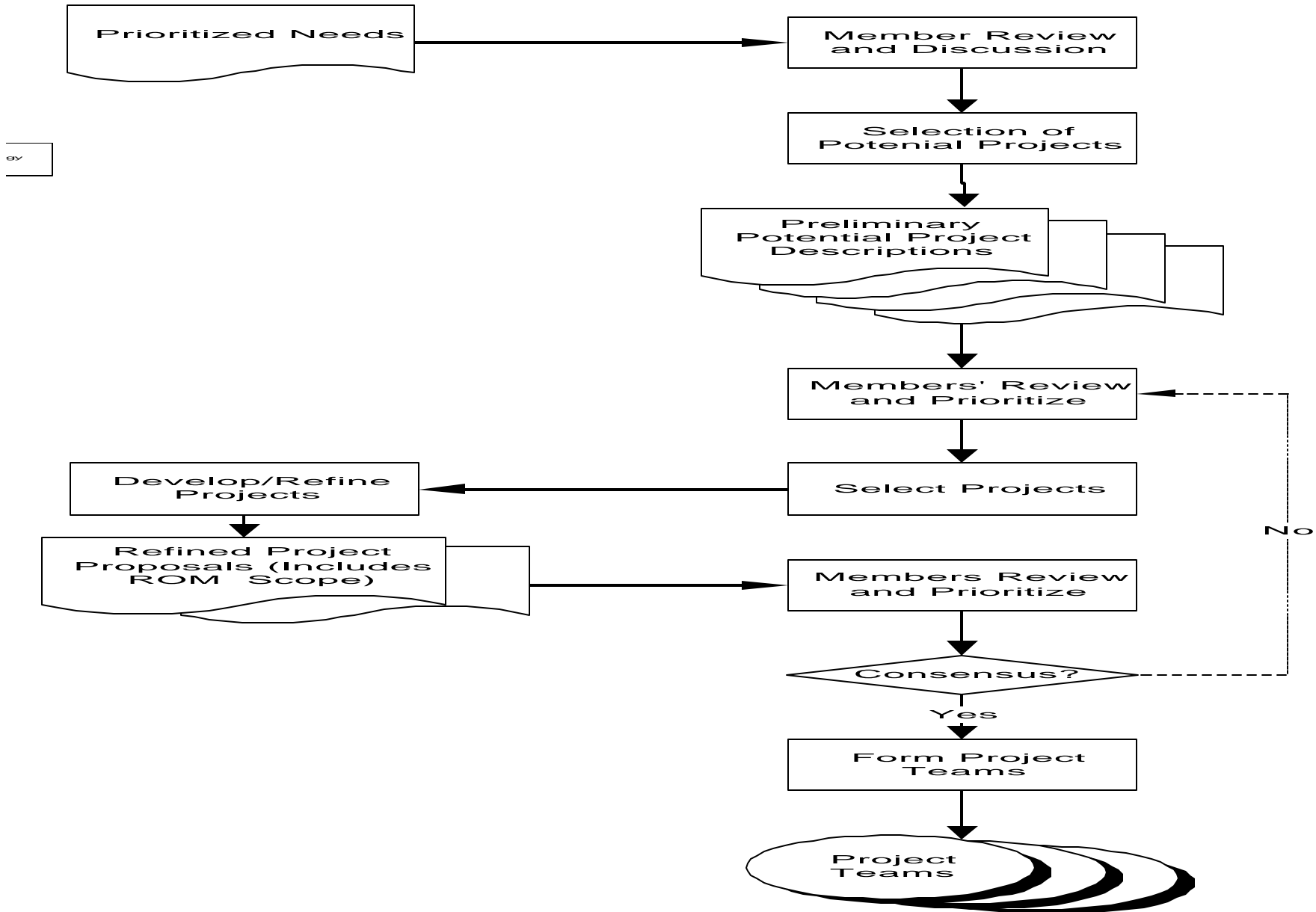
PFS Project Life Cycle:



Process to Identify & Prioritize Needs:



Process to Prioritize & Select Projects:



ITE TMC Committee:

Mission:

To promote & facilitate interaction, sharing of information, & successful practices that advance the state-of-the-practice & capabilities of TMC's to optimize the performance of facilities they manage.

ITE TMC Committee: (Cont.)

Objectives:

- Coordinate w/ other industry groups on key issues of national concern w/ TMC's
- Promote technical resources, best practices, technical contacts, & peer interaction supported on web site
- Collect, inventory, & warehouse best practices
- Strategic working group to provide direction & solicit involvement from other practitioners

Project Proposal Form:

- Title
- Statement of problem
- Suggested approach
- Products & end users/audience
- Technology transfer mechanisms
- Cost estimate & in-kind support
- Schedule & major milestones
- Anticipated benefits

Framework for TMC Projects:

- Facilitate identification of common needs and gaps in practice w/ national focus
- Assist w/ prioritization of projects
- Communicate boundaries of study
- Identify major areas of emphasis
- Organize current & future projects
- Flexible - change as needed

TMC Project Framework: Proposed Topics

- System planning & program issues
- Operational policies, strategies & plans
- System design & implementation
- Performance monitoring & evaluation
- Staffing & training issues
- System maintenance concept & plans
- TMC technology transfer & outreach

Project 1: Transportation Management Strategies for Special Events

Problem Statement:

- Planning & development of strategies specific to special events not common practice
- Transportation services during special events requires agencies to work together
- Opportunity to pursue operational practices & apply technologies to improve system performance & other services
- Manage increased travel demand & utilize available roadway & service capacity

Project 1: Transportation Management Strategies for Special Events

Suggested Approach:

- ID & classify types, characteristics & potential level of effort w/ planning for special events
- Document plans, procedures, manuals, operational strategies, range & type of services provided
- ID stakeholders & institutional arrangements
- Document processes, procedures & protocols used to coordinate operation of services, systems & traffic control
- Profile successful regional or agency practices

Project 3: Acceptance Testing for TMC's

Problem Statement:

- Plans & procedures developed in other industries
- Acceptance testing programs & procedures not consistently developed & applied in transportation
- Acceptance testing should be considered throughout planning, design, implementation & operation of a traffic management system
- Provide technical & administrative direction to validate performance requirements have been satisfied for system, component or technology

Project 3: Acceptance Testing for TMC's

Suggested Approach:

- Technical guidance on how to develop acceptance testing program & apply techniques
- ID standard procedures & practices developed in other industries applicable to traffic mngmnt. systems
- ID techniques to trace test & evaluation plans through all phases of system life cycle
- Identify range of potential issues to consider with each major type of test to be considered
- Profile successful agency practices

Problem 5: TMC Operator Requirements

Problem statement:

- Difficult to establish job classifications for operators that attract & attain individuals w/ required KSA's
- Identification of operator requirements not available
- Guidelines needed that can be:
 - Tailored to the functions of any TMC
 - Identify required KSA's & associated training
 - Identify comparable job classifications
 - Provide necessary supporting documentation

Problem 5: TMC Operator Requirements

Suggested Approach:

- Develop series of metrics that can be used to:
 - ID required operator KSA's based on potential system functions & operator tasks
 - Document potential training to develop KSA's
 - Potential tasks performed by operator organized by function & level of automation
- Check list provided to identify job requirements associated w/ operator specific positions

Project 6: TMC National Conference

Problem statement:

- Prior national conferences have focused on integrated transportation management systems and the management & operation of ITS
- Regional & local conferences & workshops have been held to address common issues & advance their collective capabilities
- ID need to continue to host national conferences that address current TMC issues & challenges

Project 6: TMC National Conference

Suggested Approach:

- Provide resources to support a national conference focused on key issues & challenges facing TMC's
- Resources assist in planning, preparation of information to frame key issues, support & compile results of conference
- Potential to build off of the results from the national ITMS symposium planned for 2001

Project 7: TMC Operator Training

Course: Development

Problem statement:

- TMC operators typically have limited or no formal education, training or job experience w/ traffic ops.
- Operators missing a fundamental understanding of:
 - Traffic flow theory
 - Control plans
 - Traffic control
 - Operational strategies
- Training required to be provided locally or in-state
- Four year university curriculum not appropriate for developing operators

Project 7: TMC Operator Training

Course: Development

Suggested Approach:

- Develop a course specific for TMC operators
- Contain modules to be selected based on interest, capability, time availability & needs of local staff
- Instructors manual, participant handbook, exercises, & instructional aides developed
- Course resources made available to interested party's for local delivery

Project 12: TMC Operator Training

Course: Delivery

Problem statement:

- Training specific to TMC operators needs to be developed and delivered locally
- Limited funding & opportunities for operators to attend any type of formal TMC training
- Typically current TMC training provided with development of new systems, upgrades or installation of new technologies
- Cost is a barrier to provide formal training

Project 12: TMC Operator Training

Course: Delivery

Suggested Approach:

- Operator training course would be made available & offered in each metropolitan area w/ a TMC
- Estimated number of metro areas w/ TMC's is 40
- NHI coordinate scheduling & administration related to delivery of courses for a fee or
- PFS provide funding for delivery of specified number of courses to be delivered annually

Project 8: Configuration Management for Traffic Management Systems

Problem statement:

- Recommended practices & procedures developed and applied in other industries
- Agencies are unaware of the need, importance, & value of CM plans & formal agency procedures
- Defined processes & procedures to systematically handle change to maintain integrity of system
- CM programs & plans provide technical & administrative direction to develop & support systems

Project 8: Configuration Management for Traffic Management Systems

Suggested Approach: (Potential issues to address)

- ID standard procedures developed in other industries
- ID recommended CM practices to integrate into all phases in the development of a system
- ID range of issues to consider w/ CM program, plans, procedures, change control boards, procedures, tools, training, status accounting, & system baseline
- ID issues to consider in establishing a formal testing plan for a system, program for an agency

Project 9: Operator Training Software

Problem statement:

- Operators & dispatchers make decisions that allocate resources and implement operational changes in response to varying travel conditions
- Decisions, actions & plans implemented have a large effect on system performance
- Training system is needed to demonstrate the effects of operator & dispatch actions, or in-actions off line of live system operation

Project 9: Computer Based Training

Event Simulation for TMC Operators

Suggested Approach:

- Develop computer based training course on fundamentals of traffic engineering for operators & dispatchers
- Training course incorporate existing traffic simulation packages to graphically depict effects of operator & dispatch inputs on system performance
- Allow training to occur locally on-site & require limited instructor or senior operator support
- Self-contained system to operate in existing TMC

Project 10: FMS Operational Requirements & Concept

Problem statement:

- Operational requirements & concept of operation are key components in conceptual design of system
- Lack of technical resource document or recommended guidance for agencies to develop
- Specific technical guidance needed for freeway management systems & traffic signal control systems
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Project 10: FMS Operational Requirements & Concept

Suggested Approach: (Potential issues to address)

- Develop sample or recommended operational requirements & concept for FMS
- Develop framework to integrate requirements into preliminary & final design phases of system
- ID FMS operational support needs, typical components & analysis performed
- ID range of techniques, tools, & analysis performed

Project 11: Traffic Management System Maintenance Concept & Plans

Problem statement:

- Historically agencies experienced difficulty in maintaining traffic management systems due to:
 - inadequate funding
 - skilled staff
 - training
 - management plans
- Existing technical documents focus on day to day maintenance of system & lack of consideration of maintenance throughout system life cycle

Project 11: Traffic Management System Maintenance Concept & Plans

Suggested Approach:

Comprehensive technical resource document would be developed to provide guidance on potential issues:

- Development of maintenance program w/ resources, environment & direction to maintain system
- Integrate maintenance into all phased of system
- ID details associated w/ system operational requirements, maintenance concept, program, and specific activities

Project 13: TMC Web Site

Problem statement:

- Electronic forum needed to share information & ideas between PFS participants
- Web site provide opportunity to identify current & planned future activities to other interests
- No electronic forum exists for traffic management practitioners to share information & experiences

Project 13: TMC Web Site

Suggested Approach:

- Provide web site for PFS & ITE TMC Committee
- Potential capabilities of web site include:
 - list serve
 - document repository
 - links to other TMC & related sites of interest
 - technical resource locator for technical assistance
 - message or bulletin board
 - inventory best practices, agency or system capabilities